

Notice of Allowability

Application No.

10/813,188

Applicant(s)

PARK ET AL.

Examiner

Hana A. Sanei

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/27/06.
2. ☒ The allowed claim(s) is/are 1-3,5-8 and 10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|--|

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Response to Amendment

The Amendment, filed on 12/27/06 has been entered and acknowledged by the Examiner.

Cancellation of claims 4 & 9 has been entered.

Claims 1-3, 5-8, 10 are pending in the instant application.

Allowable Subject Matter

A. Claim 1 is allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record teaches a flat fluorescent lamp, comprising: a front substrate; a back substrate having a continuous serpentine type discharge channel defined by a plurality of partitions, which are extended from both side ends of the back substrate and alternately disposed; a pair of electrodes provided on an outer surface of any one of the front substrate and the back substrate; and an inverter to apply power to the electrodes, wherein each of the electrodes includes a discharge electrode and a plurality of subsidiary electrodes, the discharge electrodes are mounted in strip shapes along both side ends of the outer surface of the any one of the front substrate and the back substrate, and the plurality of subsidiary electrodes are mounted on the outer surface of the any one of the front substrate and the back substrate, the plurality of subsidiary electrodes being aligned with the partitions in directly overlying relation to the partitions, and the subsidiary electrodes being disposed perpendicular to the discharge electrodes, the plurality of subsidiary electrodes being alternately connected to inner edges of both the discharge electrodes so that neighboring subsidiary electrodes have

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different polarities, wherein crosstalk between parallel portions of the discharge channel is inhibited.

However, the prior art of record neither shows nor suggests that each of the subsidiary electrodes, which are positioned to be perpendicular to the discharge electrodes, has a hollow part therein as set forth in Claim 1.

B. Claim 6 is allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record teaches a backlight unit, comprising: a flat fluorescent lamp, which includes a front substrate, a back substrate having a continuous serpentine type discharge channel defined by a plurality of partitions, which are extended from both side ends of the back substrate and alternately disposed, a pair of electrodes provided on an outer surface of any one of the front substrate and the back substrate, and an inverter to apply power to the electrodes; and a frame having the diffusion member and the flat fluorescent lamp therein, wherein each of the electrodes includes a discharge electrode and a plurality of subsidiary electrodes, the discharge electrodes are mounted in strip shapes along both side ends of the outer surface of the any one of the front substrate and the back substrate, the plurality of subsidiary electrodes are mounted on the outer surface of the any one of the front substrate and the back substrate in positions that directly overlie the partitions, and are disposed to be perpendicular to the discharge electrodes, the plurality of subsidiary electrodes being alternately connected to inner edges of both the discharge electrodes so that neighboring subsidiary

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electrodes have different polarities, wherein crosstalk between parallel portions of the discharge channel is inhibited.

However, the prior art of record neither shows nor suggests that each of the subsidiary electrodes, which are positioned to be perpendicular to the discharge electrodes, has a hollow part therein as set forth in Claim 6.

C. Claim 2-3, and 5 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record teaches a flat fluorescent lamp, comprising: a front substrate; a back substrate having a continuous serpentine type discharge channel defined by a plurality of partitions, which are extended from both side ends of the back substrate and alternately disposed; a pair of electrodes provided on an outer surface of any one of the front substrate and the back substrate; and an inverter to apply power to the electrodes, wherein each of the electrodes includes a discharge electrode and a subsidiary electrode, the discharge electrodes are mounted in strip shapes along both side ends of the outer surface of the any one of the front substrate and the back substrate, the subsidiary electrodes are mounted on the outer surface of the any one of the front substrate and the back substrate, and each of the subsidiary electrodes has a first subsidiary electrode extending parallel to at least one of the discharge electrodes, and a plurality of second subsidiary electrodes defining a contour, the contour aligned with the partitions, and the second subsidiary electrodes being perpendicular to the first subsidiary electrode, the second subsidiary electrodes of both the subsidiary electrodes being alternately connected to inner edges of both the first subsidiary electrodes so that

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neighboring electrodes have different polarities, and the discharge electrode and the first subsidiary electrode are separately connected to the inverter..

However, the prior art of record neither shows nor suggests a motivation for first subsidiary electrode not being in physical contact with any one of the discharge electrodes as set forth in Claim 2.

Claims 3 and 5 are allowable because of their dependency status from claim 2.

D. Claim 7-8, and 10 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record teaches A backlight unit, comprising: a diffusion member; a flat fluorescent lamp, which includes a front substrate, a back substrate having a continuous serpentine type discharge channel defined by a plurality of partitions, which are extended from both side ends of the back substrate and alternately disposed, a pair of electrodes provided on an outer surface of any one of the front substrate and the back substrate, and an inverter to apply power to the electrodes; and a frame having the diffusion member and the flat fluorescent lamp therein, wherein each of the electrodes includes a discharge electrode and a subsidiary electrode, the discharge electrodes are mounted in strip shapes along both side ends of the outer surface of the any one of the front substrate and the back substrate, the subsidiary electrodes are mounted on the outer surface of the any one of the front substrate and the back substrate, and each of the subsidiary electrodes has a first subsidiary electrode disposed at a predetermined spacing from an adjacent one of the discharge electrodes while being in parallel

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therewith, and the discharge electrode and the first subsidiary electrode are separately connected to the inverter.

However, the prior art of record neither shows nor suggests a motivation for a plurality of second subsidiary electrodes which are in positions that are aligned with the partitions, the second subsidiary electrodes being in positions perpendicular to the first subsidiary electrode, and the second subsidiary electrodes of both the subsidiary electrodes being alternately connected to inner edges of both the first subsidiary electrodes so that neighboring electrodes have different polarities as set forth in Claim 7.

Claims 8 and 10 are allowable because of their dependency status from claim 2.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hana A. Sanei whose telephone number is (571) 272-8654. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Examiner
Hana A. Sanei



Joseph Williams
Primary Examiner